Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622 FAX: (260) 424-9124
Website: www.element.com

July 25, 2019

Nickie Geros
East Chicago Sanitary District
5201 Indianapolis Blvd
East Chicago, IN 46312
TEL: 219-391-8466
FAX:

RE: #901 Order No.: 19072243

Dear Nickie Geros:

Element Materials Technology - Fort Wayne received 2 sample(s) on 7/18/2019 for the analyses presented in the following report.

In accordance with your instructions, Element Materials Technology Indiana conducted the analysis shown on the following pages on samples submitted by your company. The results relate only to the items tested. Unless otherwise noted, all analysis was conducted using approved methodologies from EPA, SM, or other client-specified methods. All relevant sampling information is on the attached chain-of-custody form. The initials SUB as the analyst designate any testing sub-contracted by Element Materials Technology Indiana.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Ryan Fitzwater
General Manager
328 Ley Rd.
Fort Wayne, IN 46825

Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622 FAX: (260) 424-9124
Website: www.element.com

Case Narrative

WO#: **19072243**
Date: **7/25/2019**

CLIENT: East Chicago Sanitary District
Project: #901

19072243-001A
CYAN_FREE has been Sub Contracted.
19072243-002A
HG_WW has been Sub Contracted.

Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622 FAX: (260) 424-9124
Website: www.element.com

Analytical Report

(wastewater)

WO#: **19072243**

Date Reported **7/25/2019**

CLIENT: East Chicago Sanitary District
Project: #901
Lab ID: 19072243-001
Client Sample ID #901
Sample Location:

Collection Date: 7/17/2019 10:03:00 AM
Matrix: WASTEWATER

Analyses	Result	RL	Qual	Units	DF	PL	Date Analyzed
OIL AND GREASE, TOTAL				**E1664**			Analyst: **JGB**
Oil & Grease, Total	22.9	5.0		mg/L	1	50.0	7/22/2019 5:38:56 PM
OIL AND GREASE, NON POLAR				**E1664**			Analyst: **JGB**
Oil & Grease, Petroleum	17.1	5.0		mg/L	1	50.0	7/23/2019 3:23:44 PM
SV COMPOUNDS FOR CATEGORICAL RQTS				**E625**			Analyst: **GB**
Bis(2-ethylhexyl)phthalate	< 0.10	0.10		mg/L	10	0.16	7/22/2019 5:17:00 PM
Carbazole	< 0.10	0.10		mg/L	10		7/22/2019 5:17:00 PM
Fluoranthene	< 0.050	0.050		mg/L	10	0.054	7/22/2019 5:17:00 PM
n-Decane	< 0.10	0.10		mg/L	10		7/22/2019 5:17:00 PM
n-Octadecane	< 0.10	0.10		mg/L	10		7/22/2019 5:17:00 PM
SEMI-VOLATILES IN WW				**E625**			Analyst: **GB**
Phenanthrene	< 0.10	0.10		mg/L	10		7/22/2019 5:17:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
PL	Permit Limit	PQL	Practical Quantitation Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

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Fort Wayne, IN 46825
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Analytical Report

(wastewater)

WO#: **19072243**

Date Reported **7/25/2019**

CLIENT: East Chicago Sanitary District
Project: #901
Lab ID: 19072243-002
Client Sample ID #901
Sample Location:

Collection Date: 7/17/2019 10:03:00 AM
Matrix: WASTEWATER

Analyses	Result	RL	Qual	Units	DF	PL	Date Analyzed
FLUORIDE					**E300.0**		Analyst: **SKW**
Fluoride	4.1	0.5	*	mg/L	5	2.9	7/23/2019 8:31:00 AM
CHEMICAL OXYGEN DEMAND					**M5220 D**		Analyst: **DDE**
Chemical Oxygen Demand	1,100	80.0		mg/L	8		7/22/2019 3:15:00 PM
AMMONIA AS N					**E350.1**		Analyst: **AJE**
Nitrogen, Ammonia (As N)	73.5	1.00		mg/L	10	77.0	7/21/2019 9:34:23 PM
PHENOLICS IN WASTEWATER					**E420.1**		Analyst: **JGB**
Phenolics, Total Recoverable	0.150	0.125		mg/L	5	0.700	7/23/2019 4:47:25 PM
TOTAL PHOSPHORUS					**M4500-P F**		Analyst: **AN**
Total Phosphorus	1.02	0.100		mg/L	1	5.50	7/23/2019 4:26:19 PM
TOTAL SUSPENDED SOLIDS					**M2540 D**		Analyst: **MAH**
Suspended Solids (Residue, Non-Filterable)	149	57		mg/L	1		7/22/2019 5:02:00 PM
METALS IN WATER BY ICP-MS, TOTALS					**E200.8**		Analyst: **FJR**
Arsenic	0.0104	0.00020		mg/L	1	0.500	7/23/2019 2:02:56 PM
Cadmium	< 0.00020	0.00020		mg/L	1	0.0700	7/23/2019 2:02:56 PM
Chromium	0.0138	0.00040		mg/L	1	0.282	7/23/2019 2:02:56 PM
Cobalt	0.00342	0.00010		mg/L	1		7/23/2019 2:02:56 PM
Copper	0.00815	0.00020		mg/L	1	0.301	7/23/2019 2:02:56 PM
Lead	0.00106	0.00020		mg/L	1	0.224	7/23/2019 2:02:56 PM
Molybdenum	0.0261	0.00020		mg/L	1	0.200	7/23/2019 2:02:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
PL	Permit Limit	PQL	Practical Quantitation Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(wastewater)

WO#: **19072243**

Date Reported **7/25/2019**

CLIENT: East Chicago Sanitary District
Project: #901
Lab ID: 19072243-002
Client Sample ID #901
Sample Location:

Collection Date: 7/17/2019 10:03:00 AM
Matrix: WASTEWATER

Analyses	Result	RL	Qual	Units	DF	PL	Date Analyzed
METALS IN WATER BY ICP-MS, TOTALS				**E200.8**			Analyst: **FJR**
Nickel	0.0250	0.00100		mg/L	1	0.390	7/23/2019 2:02:56 PM
Tin	< 0.00500	0.00500		mg/L	1		7/23/2019 2:02:56 PM
Zinc	0.0976	0.00040		mg/L	1	1.48	7/23/2019 2:02:56 PM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level	H	Holding times for preparation or analysis exceeded
	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
	PL	Permit Limit	PQL	Practical Quantitation Limit
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

July 24, 2019

Katie Hernandez
Element Fort Wayne
328 Ley Rd, Suite 100
Fort Wayne, IN 46825
TEL: (260) 222-2132
FAX 260 471 7777

RE: 19072243-002A Order No.: 19070931

Dear Katie Hernandez:

Element Materials Technology Lafayette received 1 sample(s) on 7/23/2019 for the analyses presented in the following report.

In accordance with your instructions Element Lafayette conducted the analysis shown on the following pages on samples submitted by your company. The results related only to the items tested. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet all requirements of TNI. All relevant sampling information is on the attached Chain-of-Custody form.

All soil data, except for 29-B, are on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA180028. ISDH Certification No.: C-LA-01. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation.

Estimated uncertainty is available upon request. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344

Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: **19070931**
Date: **7/24/2019**

CLIENT: Element Fort Wayne
Project: 19072243-002A

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).

Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: **19070931**

Date Reported **7/24/2019**

CLIENT: Element Fort Wayne **Collection Date:** 7/17/2019 10:03:00 AM

Project: 19072243-002A

Lab ID: 19070931-001 **Matrix:** AQUEOUS

Client Sample ID 19072243-002A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN WATER				**E245.1**		Analyst: **BXB**
Mercury	< 0.000200	0.000200		mg/L	1	7/24/2019 8:53:46 AM

Qualifiers:				
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode

Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: **19070931**

24-Jul-19

Client: Element Fort Wayne
Project: 19072243-002A **BatchID:** **30951**

Sample ID: **MB-30951**	SampType: **MBLK**	TestCode: **HG_W_245.1**	Units: **mg/L**	Prep Date: **7/23/2019**	RunNo: **80507**
Client ID: **PBW**	Batch ID: **30951**	TestNo: **E245.1**		Analysis Date: **7/24/2019**	SeqNo: **2018647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.000200	0.000200									

Sample ID: **LCS-30951**	SampType: **LCS**	TestCode: **HG_W_245.1**	Units: **mg/L**	Prep Date: **7/23/2019**	RunNo: **80507**
Client ID: **LCSW**	Batch ID: **30951**	TestNo: **E245.1**		Analysis Date: **7/24/2019**	SeqNo: **2018648**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00995	0.000200	0.01000	0	99.5	85	115				

Sample ID: **LCSD-30951**	SampType: **LCSD**	TestCode: **HG_W_245.1**	Units: **mg/L**	Prep Date: **7/23/2019**	RunNo: **80507**
Client ID: **LCSS02**	Batch ID: **30951**	TestNo: **E245.1**		Analysis Date: **7/24/2019**	SeqNo: **2018649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00992	0.000200	0.01000	0	99.2	85	115	0.009953	0.287	20	

Sample ID: **19070870-001AMS**	SampType: **MS**	TestCode: **HG_W_245.1**	Units: **mg/L**	Prep Date: **7/23/2019**	RunNo: **80507**
Client ID: **ZZZZZZ**	Batch ID: **30951**	TestNo: **E245.1**		Analysis Date: **7/24/2019**	SeqNo: **2018675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0103	0.000200	0.01000	0	103	70	130				

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Matrix Interference	ND	Not Detected at the Reporting Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode		

Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: **19070931**

24-Jul-19

Client: Element Fort Wayne
Project: 19072243-002A **BatchID:** **30951**

Sample ID: **19070870-001AMSD** SampType: **MSD** TestCode: **HG_W_245.1** Units: **mg/L** Prep Date: **7/23/2019** RunNo: **80507**
Client ID: **ZZZZZZ** Batch ID: **30951** TestNo: **E245.1** Analysis Date: **7/24/2019** SeqNo: **2018676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0104	0.000200	0.01000	0	104	70	130	0.01034	0.377	20	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Matrix Interference	ND	Not Detected at the Reporting Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode		

Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Sample Log-In Check List

Client Name: **ELEMENT_FORT_WAYN** Work Order Number: **19070931** RcptNo: **1**

Logged by:	**Danielle Hollier**	**7/23/2019 9:10:00 AM**	Danielle Hollier
Completed By:	**Danielle Hollier**	**7/23/2019 10:01:55 AM**	Danielle Hollier
Reviewed By:	**Caitlin Duplantis**	**7/24/2019 1:11:18 PM**	Caitlin Duplantis

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx Tracking No.: 7758 0469 9978		

Log In

3.	Coolers are present?	Yes ☐	No ☐	NA ☑
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

element

CHAIN OF CUSTODY RECORD

Omega COCID 121975	PAGE: 1	OF: 1

19070931

ADDRESS
Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622
FAX: (260) 424-9124
Website: www.element.com

SUB CONTRACTOR: SL_LA
COMPANY: Element Laboratories - Lafayet
ADDRESS: 2417 W. Pinhook Rd
CITY, STATE, ZIP: Lafayette, LA 70508
PHONE
FAX
EMAIL
ACCOUNT #:

SPECIAL INSTRUCTIONS / COMMENTS:
PO- EFW032964
7/25
Need results by 7/25/19

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description
1	19072243-002A HG_WW	#901	250HDPE-HNO3	Wastewater	7/17/2019 10:03:00 AM	1	

Relinquished By	Date	Time	Received By	Date	Time
	7/22/19	1600	Fed Ex		
Relinquished By: Fed Ex	Date: 7-23-19	Time: 0910	Received By: Mledesma	Date: 7-23-19	Time: 0910
Relinquished By	Date	Time	Received By	Date	Time

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐
Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-92924-1
Client Project/Site: Cyanide 19072243

For:
Element Materials Technology
328 Ley Rd
Suite100
Fort Wayne, Indiana 46825

Attn: Katie Hernandez

Authorized for release by:
7/23/2019 2:18:30 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

PA Lab ID: 02-00416

Table of Contents

Job ID: 180-92924-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-92924-1

Receipt
The sample was received on 7/19/2019 at 9:00 AM; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 5.9º C.

General Chemistry
The following sample 19072243-001A (180-92924-1) was diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Element Materials Technology
Job ID: 180-92924-1
Project/Site: Cyanide 19072243

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Sample Summary

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-92924-1	19072243-001A	Water	07/17/19 10:03	07/19/19 09:00	

Method Summary

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Method	Method Description	Protocol	Laboratory
OIA - 1677	Available Cyanide by Flow Injection, Lig	EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Client Sample ID: 19072243-001A
Date Collected: 07/17/19 10:03
Date Received: 07/19/19 09:00

Lab Sample ID: 180-92924-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA - 1677		5			285627	07/22/19 15:40	CAK	TAL PIT
	Instrument ID: ALPKEM3									

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Analysis

CAK = Chuck Kieda

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Client Sample ID: 19072243-001A
Date Collected: 07/17/19 10:03
Date Received: 07/19/19 09:00

Lab Sample ID: 180-92924-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.27		0.010	0.0018	mg/L			07/22/19 15:40	5

QC Sample Results

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

Method: OIA - 1677 - Available Cyanide by Flow Injection, Lig

Lab Sample ID: MB 180-285627/23
Matrix: Water
Analysis Batch: 285627

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	ND		0.0020	0.00036	mg/L			07/22/19 15:12	1

Lab Sample ID: LCS 180-285627/22
Matrix: Water
Analysis Batch: 285627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Available			0.0501	0.0510		mg/L		102	82 - 132		

QC Association Summary

Client: Element Materials Technology
Project/Site: Cyanide 19072243

Job ID: 180-92924-1

General Chemistry

Analysis Batch: 285627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-92924-1	19072243-001A	Total/NA	Water	OIA - 1677	
MB 180-285627/23	Method Blank	Total/NA	Water	OIA - 1677	
LCS 180-285627/22	Lab Control Sample	Total/NA	Water	OIA - 1677	

element

CHAIN OF CUSTODY RECORD

Omega COCID 121903	PAGE: 1	OF: 1

ADDRESS
Element Materials Technology - Fort Wayne
328 Ley Rd.
Fort Wayne, IN 46825
TEL: (260) 424-1622
FAX: (260) 424-9124
Website: www.element.con

SUB CONTRATOR: **TEST_AMERICA** COMPANY: **Test America**
ADDRESS: **Sample Receiving**
CITY, STATE, ZIP: ~~**Nashville, TN 37204**~~ Pittsburgh PA
PHONE: **(800) 765-0980** FAX: **(615) 726-3404** EMAIL:
ACCOUNT #:

SPECIAL INSTRUCTIONS / COMMENTS:
Due: 7.24.19
PO# EFW032924

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
1	19072243-001A CYAN_~~FREE~~ Available	#901	500HDPENAOH	Wastewater	7/17/2019 10:03:00 AM	1	

180-92924 Chain of Custody

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	7/18/2019	3:25 PM	[signature] TAPitt	7-19-19	900
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ______ °C Attempt to Cool ? ______
Comments: ______

7757-8006-1679

Login Sample Receipt Checklist

Client: Element Materials Technology

Job Number: 180-92924-1

Login Number: 92924
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

W184 02 **Chain of Custody** M78

Laboratory Number: 19072243

Page 1 of 1

	Client Information:	Billing Information:	PO Number:	Project Name/Number: S-901
Company Name:	East Chicago Sanitary District	Same		
Contact Name:	Nickie Geros		Quote Number:	
Address:	5201 Indianapolis Blvd			Sampler's Signature
			Required QC Level	
City, State Zip:	East Chicago IN 46312			
Phone Number:	219-391-8466 Ext. 240	Ext:	Bill Monthly	Shipping Method:
Fax Number:			☐Yes	UPS / FedEx / Airborne
E-mail Address:	ngeros@eastchicago.com		☐No	DHL / (Element) / Hand / Mail

Matrix Code
DW = Drinking Water
WW = Waste Water
GW = Ground Water
AQ = Aqueous
OT = Other
SL = Sludge SOL = Solid
O = Oil SO = Soil
F = Food SW = Swab
NG = Natural Gas
NGL = Natural Gas Liquid
PW = Produced Water
CF = Completion Fluid

Which Regulations Apply:
☐RCRA ☐Drinking Water
☐POTW ☐Distribution
☐NPDES ☐Special
☐USDA/FDA ☐State
☐RECAP/RISC ☐Other

Turn Time 5 TAT (Rush turn times will incur a surcharge and must be pre-approved by lab.)

Sample ID/Description	Date	Time	Grab / Composite	Matrix	Quantity	Type P=Plastic, G=Glass, V=Vial	Pres. HCl, HNO_3, H_2SO_4, NaOH, $Na_2S_2O_3$	CYANIDE 1677	Oil & Grease T&SI	**SVOC list		*Metals	NH3, T.PHOS, COD	PHENOL	300:Fl,	TSS	
S-901 Grab	7-17-19	10:03	Grab	WW	1		NAOH	X									
S-901 Grab	|	|	Grab	WW	1	G	H2SO4		X								
S-901 Grab	|	|	Grab	WW	1	G	NONE			X							
S-901 Composite	|	|	Comp	WW	1	P	HNO3					X					
S-901 Composite	|	|	Comp	WW	1	P	H2SO4						X				
S-901 Composite	|	|	Comp	WW	1	G	H2SO4							X			
S-901 Composite	|	|	Comp	WW	1	P	NONE								X	X	

Comments
Samples Meet Acceptance Policy (Yes) No
*As, Cr, Cu, Pb, Mo, Ni, Zn, & Hg, Co, Sn,
**Carbazole, n-Decane, Fluoranthene, n-Octedecane, Phenanthrene, Bis(2EH) Phthalate

	Relinquished by	Date/Time	Received by	Date/Time
1	[signature]	7.18.19 / 10:20AM	[signature]	7.18.19 1020
2	[signature]	7.18.19 1440	K. Kwasny	7.18.19 1440
3				

Composite Sampler:
Start Date/Time: 7-17-19
End Date/Time: 7-18-19
Received at lab on ice? ☑Yes ☐No Temp: 3.6

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

8800 North US 31, Columbus, IN 47201 USA, P 812-375-0531, F 812-375-0731
328 Ley Road, Suite 100, Fort Wayne, IN 46825 USA, P 260-471-7000, F 260-471-7777
909 Executive Dr., Warsaw, IN 46580 USA, P 574-267-3305, F 574-269-6569
3371 Cleveland Road, Suite 100A, South Bend, IN 46628-9780 USA, P 574-277-0707
2417 W. Pinhook Rd, Lafayette, LA 70508-3344 USA, P 337-235-0483, F 337-233-6540